

Application No. 09/868,953
Amendment dated October 8, 2003
Reply to Office Action dated April 22, 2003

REMARKS

Favorable reconsideration and continued examination of the present application are respectfully requested.

Support for new claims 18 and 19 can be found, for example, at page 6, line 22, thru page 7, line 5.

Support for new claims 16 and 17 can be found, for example, at page 4, lines 27-31.

Support for new claim 20 can be found, for example, at page 8, lines 3-6. These amendments do not introduce new matter and are supported by the specification. Claims 1-20 are now pending.

The Applicants gratefully acknowledge the Examiner's indication at page 2 of the Office Action that Applicants' Amendment, filed March 3, 2003, has been entered and that the sequence listing submitted therewith was found to be free of errors and has been entered into the file.

The Applicants also gratefully acknowledge the Examiner's indication at pages 2-3 of the Office Action that the rejection of claims 1-4 and 8-10 under 35 U.S.C. § 101 as reading on products of nature as set forth at pages 2-3 of the previous Office Action, is withdrawn in view of the amended claims; that the rejection of claims 1-10 under 35 U.S.C. § 112, second paragraph, as set forth at pages 3-4 of the previous Office Action, is withdrawn in view of the amended claims; that the rejection of claims 1-10 under 35 U.S.C. § 112, first paragraph, regarding enablement, as set forth at pages 4-7 of the previous Office Action, is withdrawn in view of the amended claims; that the rejection of claims 1-10 under 35 U.S.C. § 112, first paragraph, regarding adequate written description, as set forth at pages 7-8 of the previous Office Action, is withdrawn in view of the

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amended claims; and that the rejection of claims 1-4 and 6-10 under 35 U.S.C. § 102(b) as set forth at pages 8-9 of the previous Office Action is withdrawn in view of the amended claims.

The Applicants further gratefully acknowledge the Examiner's indication at page 4 of the Office Action that claims 5-6 and 11-15 are allowable.

Response to the Objection of Claim 2 Under 37 C.F.R. § 1.75(c)

At page 3 of the Office Action, claim 2 is objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim, namely, claim 1. The Office Action states that the Applicants are required to cancel the claim, amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. For the following reasons, this rejection is respectfully traversed.

The Applicants have amended claim 2 so that it is an independent claim. Accordingly, the objection under 37 C.F.R. § 1.75(c) should be withdrawn.

Response to the Objection of Claim 7 Because of Informalities

At page 3 of the Office Action, claim 7 is objected to because the claim recites "SEQ ID No." whereas "SEQ ID NO." should be recited. The Examiner states that appropriate correction by the Applicants is required. For the following reasons, this objection is respectfully traversed.

To assist the Examiner, the Applicants have amended claim 7 to comply with the Examiner's requirement. This amendment does not alter the scope of the claim. Accordingly, the objection because of informalities should be withdrawn.

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Response to the Rejection of Claims 1-4 and 8-10 Under 35 U.S.C. § 102(b)

At page 4 of the Office Action, claims 1-4 and 8-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by KR97065715-A (English translation), published October 13, 1997 (the Korean publication). The Examiner states that the Korean publication discloses a composition comprising a protein of SEQ ID NO. 1. The Examiner refers to page 3, the top and bottom figures, of the Korean publication. The Examiner states that, although the Korean publication does not teach that the protein has activity on bones, the phrase "bone resorption inhibitor composition" is interpreted as an intended use, and thus is not given patentable weight in this art rejection. The Examiner states that, furthermore, the bone resorption activity recited in the claims would be inherent to the prior art compound, as it is exactly the same compound. For the following reasons, this rejection is respectfully traversed.

The Korean publication shows a gene sequence that can code for a protein of SEQ ID NO. 1. The Korean publication does not teach or suggest a composition comprising a protein of SEQ ID NO. 1. Claim 1, as amended herein, recites a bone resorption inhibitor composition having an amino acid sequence of SEQ ID NO. 2 that is produced by utilizing gene technology. The Korean publication does not disclose or otherwise suggest a composition having an amino acid sequence of SEQ ID NO. 2 that is produced by using gene technology. Claim 2, as currently amended, is also not taught or suggested by the Korean publication. Further, the Korean publication does not disclose or otherwise suggest producing the composition of claim 1 in combination with a carrier as recited for instance in claim 19. The Korean publication does not disclose that the leukocyte activating protein factor or leukocyte activating protein factor-derived substances inhibits against

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osteoclast cell activity, as claimed in claim 3. Furthermore, the Korean publication does not disclose that the substances of claim 1 have an inhibitory activity of more than 80% at a concentration of 10 micrograms per milliliter using percent inhibition of pit formation, as claimed in claim 4. The Korean publication also does not disclose the composition, wherein the substances inhibit against osteoclast cell activity, as claimed in claim 8. The Korean publication does not disclose the composition in combination with a carrier, wherein the substances of claim 1 have an inhibitory activity of more than 80% at a concentration of 10 micrograms per milliliter using percent inhibition of pit formation, as claimed in claim 9. The Korean publication does not disclose or otherwise suggest the composition of claim 1 wherein the substances have an inhibitory activity of more than 80% at a concentration of 10 micrograms per milliliter using percent inhibition of pit formation, as claimed in claim 10. The Korean publication also does not disclose or otherwise suggest the composition produced using *E. coli* or yeast cells as host cells or using pMAL-TM-C or pGEX-3X as a vector, as claimed in new claims 16 and 17. The Korean publication also does not disclose the composition in combination or contact with unfractionated bone tissue cells, as claimed in new claim 20. Accordingly, the rejection under 35 U.S.C. § 102(b) over the Korean publication should be withdrawn.

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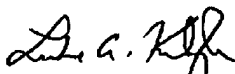
CONCLUSION

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration of the present application and a timely allowance of the pending claims.

Should the Examiner deem that any further action by Applicants or Applicants' undersigned representative is desirable and/or necessary, the Examiner is invited to telephone the undersigned at the number set forth below.

If there are any other fees due in connection with the filing of this response, please charge the fees to deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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